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Chasakopama, a new dematiaceous hyphomycetous genus from India

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Abstract — The novel dematiaceous hyphomycetous genus is characterized by discrete, polyblastic, denticulate conidiogenous cells, producing campanulate conidia singly with two dark band-like septa.

Key words — macronematous, sympodial, inflated, vasiform, *Chasakopama velgodensis*

The state of Andhra Pradesh, India has distinct forest types, several of which remain unexplored with regard to microfungi. The authors have been involved in the collection and systematic study of the microfungi of this region, giving special attention to the dematiaceous hyphomycetes associated with plant litter.

In one of these surveys, an interesting dematiaceous hyphomycetous fungus was found colonizing dead, unidentified twigs. Study of the fungus and perusal of literature (Ellis 1971, 1976; Matsushima 1975, 1983, 1996; Carmichael et al. 1980, Castañeda 1986, Mercado 1984, Mercado et al. 1997, Rao & de Hoog 1986) led to the conclusion that the fungus is undescribed. The fungus is characterized by macronematous or semi-macronematous conidiophores with polyblastic, discrete, inflated conidiogenous cells producing campanulate conidia with two dark band-like septa. As the fungus cannot be accommodated in any known genus, a new taxon is proposed.

Chasakopama Manohar., Bagyan., N.K. Rao & Kunwar, **gen. nov.**

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Coloniae effusae vel discretae, atrobrunneae, hyphis ramosus, septatis, pallide brunnea quod olivaceo brunnea. Conidiophora macronemata vel semimacronemata, mononemata,

recta vel flexuosa, septatis, pallide brunnea quod olivaceo brunnea. Cellulae conidiogena polyblastica, discreta, denticulatae. Conidis solitaris, sicca, simplicis, campanulatae, brunneis quod leniterbrunnea, biseptata, horizontalea triis atris.

Species Typica: *Chasakopama velgodensis* Manohar., Bagyan., N.K. Rao & Kunwar

Etymology: The new genus name *Chasakopama* (Sanskrit: masculine) refers to the bell- like shape of the conidia.

Colonies effuse or discrete, dark blackish brown, slightly erumpent, hairy, mycelium immersed and superficial, immersed mycelium composed of brown to pale brown group of cells while superficial mycelium composed of branched, creeping, anastomosing, septate, pale brown to olivaceous hyphae. Conidiophores macronematous or semi-macronematous, mononematous, erect, straight or flexuous, thick walled, septate, pale brown to olivaceous brown. Conidiogenous cells polyblastic, integrated, terminal, denticulate, indeterminate, sympodial, inflated, conico-cylindrical, subspherical or irregular. Conidia solitary, campanulate, smooth, light brown, thick walled with two dark band-like transverse septa.

Chasakopama velgodensis Manohar., Bagyan., N.K. Rao & Kunwar, **sp. nov.**

MycoBank MB 512920 Figs. 1–6

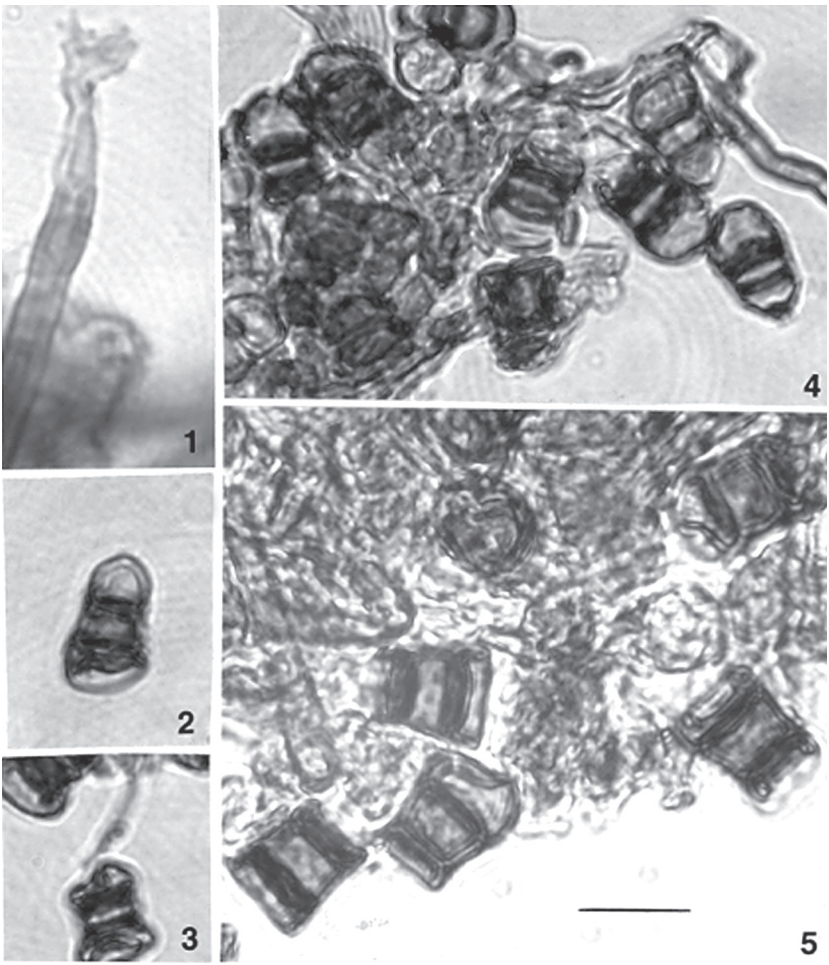
Hyphis 3–4.5 µm lata. Conidiophora 1–3 septatis, pallide brunnea quod olivaceo brunnea, usque 32 µm longis, 3–4 µm latis. Cellulae conidiogena polyblastica, discreta, denticulatae. Conidio solitaris, sicca, simplicis, campanulatae, vasiformis, laevia, membrana incrassatus, brunneis quod leniterbrunnea, biseptata, horizontalea triis, 1.5–2.5 µm crassa, conidio 11–14 µm longis, raro 18 µm, 8–10 µm lata apicalis, basim 6–8 µm lata.

Holotype: On dead, unidentified twigs, Gundlabrahmeswram, Distt. Velgod, A.P., India, 27 Nov 1984, leg. N.K. Rao, IMI 296874.

Etymology: The specific epithet denotes the place of collection.

Colonies effuse or discrete, dark blackish brown, slightly erumpent, hairy, mycelium both immersed and superficial, immersed mycelium composed of brown to pale brown group of cells while superficial mycelium composed of branched, creeping, anastomosing, septate, pale brown, olivaceous hyphae, 3–4.5 µm thick. Conidiophores macronematous or semi-macronematous, mononematous, erect, straight or flexuous, thick walled, smooth, pale brown to olivaceous brown, 1–3 septate, up to 32 µm long, 3–4 µm wide. Conidiogenous cells polyblastic, integrated, denticulate, indeterminate, conico-cylindrical, inflated, subspherical, or irregular. Conidia solitary, campanulate, smooth, light brown, thick walled with two dark band-like transverse septa, 1.5–2.5 µm thick, conidia 11–14 µm long, rarely up to 18 µm long, 8–10 µm wide at the apex, 6–8 µm wide at the base.

The fungus described above shows superficial resemblance with the genus *Colemaniella* Agnihothr. (Agnihothrudu 1974) but differs from it in



Figs. 1–5. *Chasakopama velgodensis.* 1. Part of conidiophore with denticulate conidiogenous cell. 2–5. Conidia. 1, 5 Bar = 10 µm; 2–4. Bar = 12 µm.

conidiogenesis and the presence of transverse septa. It also resembles to some extent in conidial shape with *Spadicoides subramanianii* Bhat (Bhat 1985) but the conidiogenous cells are discrete in the present fungus while in *Spadicoides* S. Hughes, they are integrated. The fungus shows some unique characters like polyblastic, discrete, denticulate, inflated conidiogenous cells; campanulate, conidia with two dark, band-like septa. We have found no satisfactory placement for this fungus among the described genera known, and thus necessitating erection of the new genus.

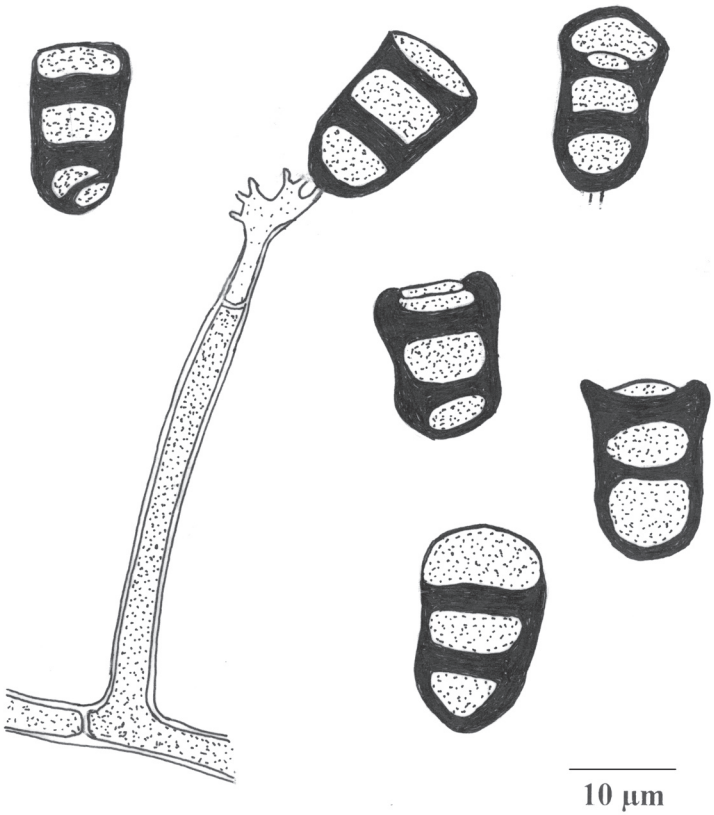


Fig. 6. Conidiophore, conidiogenous cell and conidia of *Chasakopama velgodensis*.

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